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10/568,146

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David Alan Pears

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MORGAN LEWIS & BOCKIUS LLP  
1111 PENNSYLVANIA AVENUE NW  
WASHINGTON, DC 20004

EXAMINER

QIAN, YUN

ART UNIT

PAPER NUMBER

1793

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/568,146 | <b>Applicant(s)</b><br>PEARS ET AL. |  |
|                              | <b>Examiner</b><br>YUN QIAN          | <b>Art Unit</b><br>1793             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 13-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 35-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                            | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Election/Restrictions***

Applicant's election with traverse of Group I claims 1-12 and newly added 35-37 in the reply filed on June 5, 2009 is acknowledged.

Applicants' arguments are not found persuasive because Group I drawn to a microencapsulated catalyst-ligand system, and Group II, claims 13-34, drawn to a process for the preparation of a microencapsulated catalyst-ligand system.

The reference (Ley et al, WO03/006151) was cited in the International Search Report disclose all limitations of the special technical feature (a catalyst and a ligand encapsulated within a polymeric shell) recited in claim 1. Wilkinson's catalysts  $\text{RhCl}(\text{PPh}_3)_3$ , one of examples given by Ley et al., is a transition metal and ligand (triphenylphosphine) that are microencapsulated as present application (pages 9-10).

Since the special technical feature is disclosed by the prior art, that special technical feature does not provide a contribution over the prior art. Further, because PCT Rule 13. 2 states that a lack of unity exists when the special technical feature does not provide a contribution over the prior art, and because the examiner has disclosed references which teach this special technical feature, a proper assertion has been made that there exists lack of unity.

The requirement is still deemed proper and is therefore is made FINAL.

The claims 13-34 are withdrawn from consideration.

### **Claim Objections**

Claim 3 objected to because of the following informalities: "polymerisation" is misspelled. It should be read as "polymerization". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-12 and 35-37 are rejected under 35 U.S.C. 102 (e) as being anticipated by Ley et al. (WO 03/006151).

Regarding claim 1, Ley et al. teaches a microencapsulated catalyst-ligand system comprising a catalyst and ligands microencapsulated within a permeable polymer microcapsule shell (claims 1-3).

Regarding claim 2, the microencapsulated catalyst system taught by Ley et al. comprises a catalyst and ligands (i.e. Wilkinson's catalysts  $\text{RhCl}(\text{PPh}_3)_3$ , Rh corresponds to applicant's catalyst, and triphenylphosphine corresponds to applicant's ligand) microencapsulated within a permeable polymer microcapsule shell wherein the microcapsule shell is formed by interfacial polymerization (pages 9-10, claims 1-3).

In addition, the chiral phosphine ligand/transition metal catalyst system is also as evidenced by Burk et al (US 5,008,457) which is entirely incorporated by reference through Ley et al (page 9).

Regarding claim 3, as discussed above, the microencapsulated catalyst system taught by Ley et al. comprises a catalyst and ligands microencapsulated within a permeable polymer microcapsule shell wherein the microcapsule shell is formed by interfacial polymerization (pages 9-10, claims 1-3).

Product-by-process limitation in this claim is noted. It is considered while the product of the reference is made by a different process, the product made and disclosed is the same as being claimed. see "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." (In re Thorpe, 227 USPQ 964,966). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product (In re Marosi, 710 F.2d 798, 802,218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113)

Regarding claim 4, the permeable polymer microcapsule shell taught by Ley et al. is the product of self-condensation and/or cross-linking of etherified urea-

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formaldehyde resins or prepolymers in which from about 50 to about 98% of the methylol groups have been etherified with a C<sub>4</sub>-C<sub>10</sub> alcohol (claim 3).

Regarding claim 5, the permeable polymer microcapsule shell is a polyurea microcapsule prepared.

Product-by-process limitation in this claim is noted. It is considered while the product of the reference is made by a different process, the product made and disclosed is the same as being claimed. see "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." (In re Thorpe, 227 USPQ 964,966). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product (In re Marosi, 710 F.2d 798, 802,218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113)

Regarding claim 6, Ley et al. teaches 1-chloro-2,4-phenylene diisocyanate, m-phenylene diisocyanate, and PMPPi as the recited claim (claim 5).

Regarding claims 7-8, the catalyst taught by Ley et al. is an inorganic catalyst such as metal oxide (osmium tetroxide) (claim 25).

Regarding claims 9 and 36, the catalyst taught by Ley et al. comprises  $\text{Pd}(\text{OAc})_2$  as the recited claims (claim 25).

Regarding claims 10-12, as discussed above, the ligand taught by Ley et al. comprises triphenylphosphine (Wilkinson's catalysts  $\text{RhCl}(\text{PPh}_3)_3$ ). It meets the claimed limitations.

Regarding claim 35, Ley et al. teaches to dissolve palladium acetate in a suitable solvent such as a hydrocarbon solvent or a chlorinated hydrocarbon solvent (page 9).

Regarding claim 37, the microencapsulated catalyst system taught by Ley et al. includes the catalyst of  $\text{Pd}(\text{OAc})_2$  (claim 25),  $\text{PPh}_3$  ligand (Wilkinson's catalyst, page 10), and the shell made from PMPPI and/or tolylene diisocyanate (page 5).

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUN QIAN whose telephone number is (571)270-5834. The examiner can normally be reached on Monday-Thursday, 10:00am -4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENZO/  
Supervisory Patent Examiner, Art Unit 1793

/YUN QIAN/  
Examiner, Art Unit 1793